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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,273	11/13/2003	Alain Renaud Boulet	941915	5644

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EXAMINER

TRAN, LEN

ART UNIT PAPER NUMBER

1725

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,273

Applicant(s)

BOULET, ALAIN RENAUD

Examiner

Len Tran

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/13/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 10-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

- I. Claims 1-5 pertain to magnesium die cast machine.
- II. Claims 6-20 pertain to magnesium die cast machine for recycling.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Mr. Hans Koenig on July 7, 2004 a provisional election was made with traverse to prosecute the invention of group II, claims 6-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-5 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 6, 7, 14, 15, 16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano (US 4,753,283).

As to claim 6 and 18, Nakano discloses a die casting machine capable of casting magnesium alloy comprising a re-melt furnace, and a crucible (6), in fluid communication with a

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casting furnace (3) in fluid communication with a pump (figure, col. 2, lines 61-65), for supplying molten metal to the die casting machine (7a and 7b).

As to claim 7, the remelt furnace does not have to use flux.

As to claim 14, the remelt furnace is in fluid communication with the casting furnace through a U- shaped tube (5) (figure).

As to claim 15, the U-shaped tube functions by siphoning (figure).

As to claim 16, the U-shaped tube is heated by the molten metal.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano (US '283) as applied to claim 6 above, and further in view of Mercer, II et al (US 5,388,633).

As to claims 8 and 9, Nakano discloses the claimed invention above, but fail to teach the remelt furnace includes a plurality of heating zones and wherein each heating zone includes a heating element.

However, Mercer, II et al disclose a melting furnace (10) includes a plurality of heating zones around the insulation (17) and each heating zone including a heating element (24) for the purpose of maintaining the temperature of the metal within a predetermined range.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide heating means at each heating zones as taught by Mercer, II et al, in Nakano in order to maintain melting temperature of the metal.

7. Claims 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano (US '283) as applied to claim 6 above, and further in view of Fields et al (US 5,370,171).

Nakano discloses the claimed invention above, but fails to teach a filter and removable baffles.

However, Fields et al disclose a baffle (56) located within the crucible (8) and a filter (54) for the purpose of assuring adequate clean supply of molten metal for casting (col. 12, lines 12-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide a filter and baffles as taught by Fields et al, in Nakano in order to supply clean molten metal for casting.

Allowable Subject Matter

8. Claims 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior arts of record fail to teach heating zones comprise different heat transfer materials in one or more zones and plurality of temperature sensors at a plurality of locations within the remelting furnace.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Len Tran whose telephone number is (571) 272-1184. The examiner can normally be reached on M-F, 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Len Tran
Examiner
Art Unit 1725



LT
November 23, 2004